

CLAIMS

1. Data requesting device (2) through at least one first
5 communication network (5) from at least one data server (10), said data
requesting device (2) being able to support up to a maximum bandwidth rate
(CBW), and comprising:

- at least one input buffer (21) having an input buffer side
(CSOCKBUFSZ),
- 10 - sending means (22) for sending requests (REQU) of
determined data to the server (10) via at least one second communication
network (6),
- and receiving means (23) for receiving streamed data (DATA)
from said server (10) into said input buffer (21) via said first communication
15 network (5) and for providing said data to processing means (24) for them to
be exploited,

characterized in that said data requesting device (2) comprises
retrieving means (25) for retrieving information (INFO) representative of said
maximum bandwidth rate (CBW) and of said input buffer side
20 (CSOCKBUFSZ), and in that said sending means (22) are intended to
transmit to said server (10) via said second network (6) said information
(INFO), so that said server (10) is able to determine at least one size
(UNIT_SIZE) of successive portions of said required data and at least one
delay (PERIOD) between two successive sending steps of said portions.

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2. Data requesting device (2) according to claim 1, characterized
in that it comprises a data pump (27) intended to extract data available in
said input buffer (21) and to transfer said data into a central memory (26) for
said data to be exploited by said processing means (24), said data pump
30 (27) being able to produce a pause control signal (XOFF) when said data in
said central memory (26) exceed a predetermined high threshold level

(HFIFO) of said central memory (26), and in that said sending means (22) are intended to transmit said pause control signal (XOFF) to said server (10).

5 3. Data requesting device (2) according to any of claims 1 or 2, characterized in that said data pump (27) is able to produce a resume control signal (XON) when the data transfer from said input buffer (21) to said central memory (26) has been paused and said data in said central memory (26) decrease down to a predetermined low threshold level (LFIFO)
10 of said central memory (26), and in that said sending means (22) are intended to transmit said resume control signal (XON) to said server (10).

 4. Data requesting device (2) according to any of claims 2 or 3, characterized in that it comprises an injector (28) intended to transfer said
15 data from said central memory (26) to said processing means (24) only when said data in said central memory (26) fill up to a predetermined middle threshold level (MFIFO) of said central memory.

 5. Data requesting device (2) according to any of claims 2 to 4,
20 characterized in that at least one of said threshold levels (HFIFO, LFIFO, MFIFO) of said central memory (26) depends on a round-trip time (RTT) between said data requesting device (2) and said server (10).

 6. Data requesting device (2) according to any of the preceding
25 claims, characterized in that said data requesting device (2) is able to produce pause (XOFF), resume (XON) and seek (SEEK) control signals for respectively pausing and resuming data streaming and for positioning at given appropriate places of said determined data, and said sending means (22) are intended to transmit to said server (10) sequences of successively
30 said pause (XOFF), seek (SEEK) and resume (XON) control signals, so as to allow at least one feature among fast motion and reverse motion.

7. Decoder, characterized in that it comprises a data requesting device (2) according to any of claims 1 to 6.

5 8. Data requesting process through at least one first communication network (5) from at least one data server (10) to a data requesting device (2) able to support up to a maximum bandwidth rate (CBW) and comprising at least one input buffer (21) having an input buffer side (CSOCKBUFSZ), said requesting process comprising the following
10 steps:

- sending requests (REQU) of determined data to the server (10) via at least one second communication network (6),
- and receiving streamed data (DATA) from said server (10) into said input buffer (21) for them to be exploited,

15 characterized in that said data requesting process comprises sending information (INFO) representative of said maximum bandwidth rate (CBW) and of said input buffer side (CSOCKBUFSZ) from said data requesting device (2) to said server (10) via said second network (6), so that
20 said server (10) is able to determine at least one size (UNIT_SIZE) of successive portions of said required data and at least one delay (PERIOD) between two successive sending steps of said portions,

 said data requesting process being preferably intended to be
25 executed by means of a data requesting device (2) compliant with any of claims 1 to 7.

 9. Data transmitting device (1) comprising:
- receiving means (11) for receiving requests (REQU) of
30 determined data from at least one data requesting device (2),

- specification means (12) for determining at least one size (UNIT_SIZE) of successive portions of said data to be provided to said data requesting device (2),

- and streaming means (13) for triggering streaming of said data portions (DATA) to said data requesting device (2),

said receiving means (11) being intended to receive from said data requesting device (2) information (INFO) representative of capacities of said data requesting device (2), and said specification means (12) being intended to determine said portion size (UNIT_SIZE) in function of said information (INFO),

characterized in that:

- said specification means (12) are intended to determine at least one delay (PERIOD) between two successive sending steps of said portions in function of said information (INFO),

- and said streaming means (13) are intended to periodically trigger streaming of said data portions having said portion size (UNIT_SIZE) to said data requesting device (2), with a period equal to said delay (PERIOD),

said data transmitting device (1) being preferably provided for a data requesting device (2) according to any of claims 1 to 6.

10. Data transmitting device (1) according to claim 9, characterized in that said receiving means (11) are intended to receive pause control messages (XOFF) from said data requesting device (2), and said streaming means (13) are intended to pause said data streaming when one of said pause control messages (XOFF) is received.

11. Data transmitting device (1) according to any of claims 9 or 10, characterized in that said data requesting device (2) being able to

support up to a maximum bandwidth rate (CBW) and comprising at least one input buffer (21) having an input buffer side (CSOCKBUFSZ), said capacities consist in said maximum bandwidth rate (CBW) and said input buffer side (CSOCKBUFSZ).

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12. Data transmitting device (1) according to any of claims 9 to 11, characterized in that said receiving means (11) are intended to receive slow motion messages from said data requesting device (2), and said specification means (12) are intended to determine at least one increased value of said period (PERIOD) when said slow motion messages are received.

13. Data transmitting device (1) according to any of claims 9 to 12, characterized in that said receiving means (11) are intended to receive at least one kind of messages among fast motion and reverse motion messages, from said data requesting device (2), and said data transmitting device (1) comprises parsing means (16) able to identify successive relevant places in said determined data for at least one of said fast and reverse motions, said specification means (12) being provided for successively positioning at said places, when one of said fast motion and reverse motion messages is received.

14. Data transmitting process comprising the following steps:

- receiving requests (REQU) of determined data from at least one data requesting device (2), as well as information (INFO) representative of capacities of said data requesting device (2),
- determining at least one size (UNIT_SIZE) of successive portions of said data to be provided to said data requesting device (2), in function of said information (INFO),
- and streaming said data portions (DATA) to said data requesting device (2),

characterized in that:

- said specification step includes determining at least one delay
(PERIOD) between two successive sending steps of said portions in function
5 of said information (INFO),

- and said streaming step includes periodically streaming said
data portions having said portion size (UNIT_SIZE) to said data requesting
device (2), with a period equal to said delay (PERIOD),

10 said data transmitting process being preferably intended to be
executed by a data transmitting device (1) compliant with any of claims 9 to
13.

15 15. Computer program product, characterized in that it comprises
program code instructions for executing the steps of one of the processes of
claims 8 and 14 when said program is executed on a computer.